

## Goodrich UPCO Perchlorate Update, Testing, and Analysis

Goodrich Universal Propulsion Company (UPCO), located at the intersection of Central Avenue and Happy Valley Road in north Phoenix, manufactures solid propellant actuated devices, aircraft ejection seats, aircrew escape systems, stun grenades, gas generators, and other miscellaneous products related to the military and aerospace industries.

On March 23, 2004, officials from UPCO informed ADEQ that recent groundwater monitoring tests conducted at the facility revealed the presence of perchlorate ranging from 43 to 130 micrograms per liter ( $\mu\text{g/L}$ ) or parts per billion in their groundwater monitoring wells.

### What is Perchlorate?

Perchlorate is a synthetic chemical commonly manufactured for use in solid propellant for rockets, missiles, and fireworks. Perchlorate is soluble in water, and if ingested, can interfere with iodide uptake into the thyroid gland and disrupt thyroid function.

### What environmental regulations apply to UPCO?

UPCO is subject to the requirements of Resource Conservation & Recovery Act hazardous waste rules, aquifer protection standards, air quality control and open burning standards, Safe Drinking Water Act, and storm water discharge requirements. To enforce these regulatory standards, permits have been issued to UPCO by ADEQ and Maricopa County Environmental Services. Each permit includes requirements to limit the release of regulated pollutants to below the standards set by federal, state, or county government. Permits also have monitoring and testing requirements to ensure that the facility complies with the conditions and terms of each permit.

### Is there perchlorate in my drinking water?

Starting on March 24, 2004, a total of 50 neighboring wells located to the north, northwest, west,

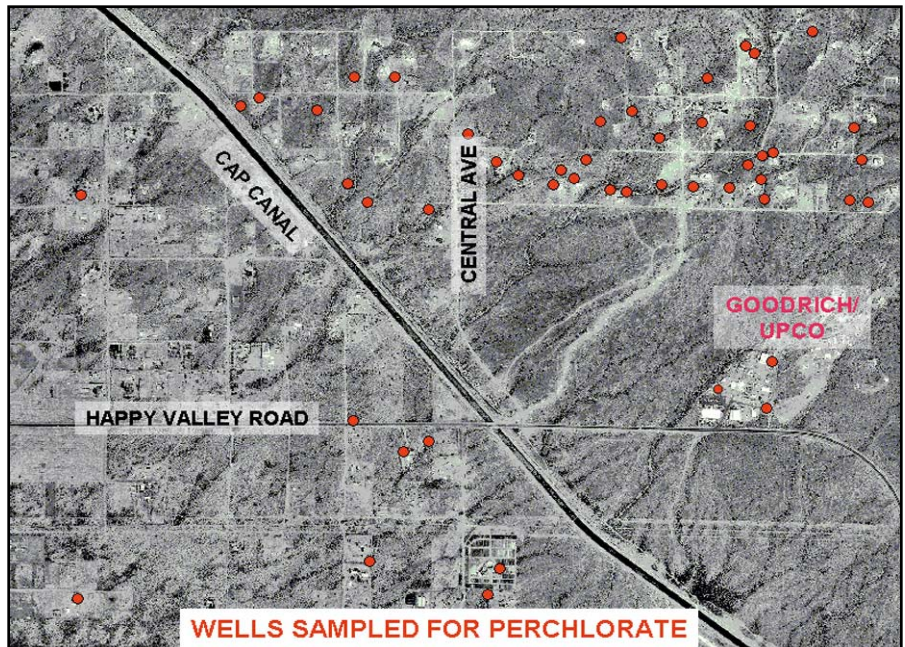


Figure 1: Location of tested wells.

southwest and south of the UPCO facility were tested by ADEQ and UPCO. ADEQ collected 44 samples from 41 wells and UPCO collected 22 samples from 21 wells (see Figure 1). None of the collected samples were found to contain levels of perchlorate above the Method Reporting Level of 2  $\mu\text{g/L}$ . Based on the sampling results, restrictions on the use of water for drinking and cooking are not necessary.

### Are the sampling results reliable?

The samples were sent to an Arizona Department of Health Services certified laboratory and analyzed by U.S. EPA-approved Method 314.0. This method can detect small amounts of perchlorate to 2  $\mu\text{g/L}$  in water.

### How is perchlorate regulated in water?

There is no National Primary Drinking Water Regulation for perchlorate. In 1996, U.S. EPA placed perchlorate on the contaminant Candidate List and suggested an action level ranging from 4  $\mu\text{g/L}$  to 18  $\mu\text{g/L}$ . The Arizona Department of Health Services has an established Health Based Guidance Level for perchlorate of 14  $\mu\text{g/L}$ .

### Is there going to be further investigation of perchlorate contamination at the UPCO site?

ADEQ has directed UPCO to investigate and define the extent and degree of perchlorate in the groundwater. UPCO is in the process of obtaining the necessary permits to install four additional monitoring wells at the facility and two monitoring wells south of the facility across Happy Valley Road. Well locations are shown on Figure 2. Data collected from these wells will help determine the extent and distribution of the perchlorate in the groundwater and the direction of groundwater flow in the vicinity.

Also, ADEQ has directed UPCO to conduct additional soil sampling to characterize the extent of soil potentially impacted by perchlorate. Characterization activities are designed in each area based on past and present operations that may have resulted in perchlorate releases. Soil samples will be analyzed for perchlorate concentration using U.S. EPA Method 314.0.

### Will the site be remediated?

Yes, once the extent and degree of contamination is determined and hydrological data is collected, UPCO will propose a remediation plan for ADEQ review. When the plan is tentatively approved by ADEQ, it will be available for public comments.

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Figure 2: Location of monitoring wells.